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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CRAIG, DWIN M

ART UNIT

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2123

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/692,807	Applicant(s) KAMIYAMA, NAOYA	
	Examiner DWIN M. CRAIG	Art Unit 2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5-8,10 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5-8,10 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/12/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/19/2007 has been entered.

2. Claims 1, 5, 6, 7, 8, 10 and 11 have been presented for continued examination in view of Applicants' request for Continued Examination under 37 CFR 1.114.

Claim Interpretation

3. As regards claims 1, 5, 6, 7, 8 and 10 Applicants' are respectfully directed to section 2114 of the MPEP which states:

">While features of an apparatus may be recited either structurally or functionally, claims< directed to >an< apparatus must be distinguished from the prior art in terms of structure rather than function. >In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997) (The absence of a disclosure in a prior art reference relating to function did not defeat the Board's finding of anticipation of claimed apparatus because the limitations at issue were found to be inherent in the prior art reference); see also In re Swinehart, 439 F.2d 210, 212-13, 169 USPQ 226, 228-29 (CCPA 1971);< In re Danly, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). "[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original)."

Taking newly amended claim 1 as an example, the current claimed simulation *apparatus* contains the following components;

An output data setting section, a data output section, a storage section, an event storage section and an event playback section.

ANY teaching of an apparatus that contains those components listed above and that also does not specifically teach the claimed functionality of the components precludes the performance of the claimed functional steps, will teach the components of the claimed *apparatus* and therefore meets the call of the claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 5, 6, 7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,535,620 to Nichols in view of U.S. Patent 5,287,489 to Nimmo et al.

As regards independent claims 1, 5, 6, and 11 and using claim 1 as an example, *Nichols* teaches, a simulation apparatus comprising (Figures 1 & 2 and the descriptive text): an output data setting section for setting data (Col. 2 lines 32-50 and Col. 2 lines 57-67 "...user defined inputs to the engine management system jointly control the engine" and Col. 4 lines 45-67 and Col. 5 lines 1-10 and Col. 5 lines 18-38 "This flag is generated based on user supplied input as to the cycle pattern for the test..." data is being set based on the user input and this is output data because the data being set creates a simulated *exhaust* or output condition, see Col. 5 line 6 "...simulated exhaust gas signals..."),

which is output to a control target during execution of simulation (Col. 5 lines 25-27 "...the engine control module or engine management system controls the injectors..." see also Col. 6 lines 9-37); a data output section for supplying the control target with output data created on the basis of the data set through the output data setting section (Col. 6 lines 23-65 the ignition control signals based on the simulated input are controlling the engine and the simulated exhaust gases are an output that is the basis for the result of the simulation).

However *Nichols* does not expressly disclose, a storage section; an event data storage section and an event playback section.

Nimmo et al. teaches, a storage section see Figure 1 item 36, an event data storage section, which further includes a method of setting event data, see Figure 1 and Col. 4 lines 13-32 and Col. 6 lines 27-58 more specifically, line 31 "...defining procedural events..." regarding storage of event data see, all of Figure 2 and regarding an event playback section see Col. 5 lines 55-59.

Nichols and *Nimmo et al.* are analogous art because they both come from the same problem solving area of simulation systems.

At the time of the invention, it would have been obvious to a person of ordinary skill to used the playback apparatus of *Nimmo et al.* with the data setting apparatus of *Nichols*.

The suggestion for doing so would have been to provide an interactive tool for editing interactive simulation training systems, see *Nimmo et al.* Col. 2 lines 9-18.

Therefore, it would have been obvious to combine *Nimmo et al.* with *Nichols* in order to obtain the invention in claims 1, 5, 6 and 7.

4.2 As regards the limitation in independent claim 5 of having as a part of the apparatus a *waiting time setting section* see *Nimmo et al.* Col. 5 lines 55-61, more specifically on line 58-59, "...set a delay...". Setting a delay is the same thing as setting a wait time.

4.3 As regards the limitation in claim 6 of having a playback number setting section, *Nimmo et al.* the examiner has interpreted this limitation to mean that the playback apparatus has a mechanism to set a save point, see *Nimmo et al.* Col. 5 lines 55-61.

4.4 As dependent claim 7, *Nimmo et al.* teaches, *an event data editing section* (Col. 6 lines 27-58).

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,535,620 to Nichols in view of U.S. Patent 5,287,489 to Nimmo et al. and in further view of U.S. Patent 6,625,789 to Ara et al.

5.1 Regarding claim 8, *Nichols* teaches, a simulation apparatus comprising (Figures 1 & 2 and the descriptive text): an output data setting section for setting data (Col. 2 lines 32-50 and Col. 2 lines 57-67 "...user defined inputs to the engine management system jointly control the engine" and Col. 4 lines 45-67 and Col. 5 lines 1-10 and Col. 5 lines 18-38 "This flag is generated based on user supplied input as to the cycle pattern for the test..." data is being set based on the user input and this is output data because the data being set creates a simulated *exhaust* or output condition, see Col. 5 line 6 "...simulated exhaust gas signals..."), which is output to a control target during execution of simulation (Col. 5 lines 25-27 "...the engine control module or engine management system controls the injectors..." see also Col. 6 lines 9-37); a data output section for supplying the control target with output data created on the basis of the data set through the output data setting section (Col. 6 lines 23-65 the ignition control signals based on the simulated input are controlling the engine and the simulated exhaust gases are an output that is the basis for the result of the simulation).

However *Nichols* does not expressly disclose, a storage section; an event data storage section and an event playback section and a signal waveform editing section.

Nimmo et al. teaches, a storage section see Figure 1 item 36, an event data storage section, which further includes a method of setting event data, see Figure 1 and Col. 4 lines 13-32 and Col. 6 lines 27-58 more specifically, line 31 "...defining procedural events..." regarding

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storage of event data see, all of Figure 2 and regarding an event playback section see Col. 5 lines 55-59.

Ara et al. teaches a waveform editor, see Figures 15 & 16 and the descriptive text more specifically, Col. 16 lines 53-67 more specifically, "... a waveform editor program whereas a user has a web browser connected to the server by a network. The user activates the waveform editor program on the web browser and enters the desired series of signals to the server through the editor..."

Nichols, *Ara et al.* and *Nimmo et al.* are analogous art because they all come from the same problem solving area of simulation.

At the time of the invention, it would have been obvious to a person of ordinary skill to used the playback apparatus of *Nimmo et al.* with the data setting apparatus of *Nichols* and with the waveform editing teachings of *Ara et al.*

The suggestion for doing so would have been to provide an interactive tool for editing interactive simulation training systems, see *Nimmo et al.* Col. 2 lines 9-18. As regards the motivation to modify *Nichols* with the waveform editor teachings of *Ara et al.*, an artisan of ordinary skill would have been motivated to provide a simple to use method of generating stimulus signals to the control target of the simulation in order to provide a method of "bit banging" specific data pins on the target hardware to determine if the programmed functionality was erroneous or not. The Examiner knows from personal knowledge that this testing methodology used in simulation and testing is well known in the simulation art.

Further and in regards to the requirement for a teaching, suggestion and/or motivation please see *Dann v. Johnson*, 425 U.S. 219, 189 USPQ 257 (1976) and *Leapfrog Enterprises, Inc.*

v. Fisher-Price, Inc., --F.3d--, 82 USPQ2d 1687 (Fed. Cir. 2007) as well as *KSR International Co. v. Teleflex Inc.*, 550 U.S. --, 82 USPQ2d 1385 (2007). The cited cases recently decided by the Federal Circuit Court as well as the U.S. Supreme Court clearly set forth that the references themselves do not have to expressly disclose a teaching, suggestion or motivation to combine references in an obviousness type of art rejection.

Therefore, it would have been obvious to combine *Nimmo et al.* and *Ara et al.* with *Nichols* in order to obtain the invention in claim 8.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Nichols* in view of *Nimmo et al.* as applied to claim 7 above and in further view of U.S. Patent 5,794,005 to Steinman.

6.1 *Nichols* as modified by *Nimmo et al.* teaches a simulation system with simulation event editing and playback ability as applied to claim 7 above in that their combined teaching lacks, (claim 10) the event editing section includes a text editing section.

Steinman teaches a text editor used to modify a simulation object that can be used for playback see (Col. 8 lines 5-14).

Nichols as modified by *Nimmo et al.* and *Steinman* are analogous art because they are both related to simulation.

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made, to utilize a text editor in a simulator with playback ability so that portions of the simulation can be annotated for future review an “what if” analysis. Such a suggestion can be found in *Steinman* Col. 8 Lines 12-14.

Response to Arguments

7. Applicants' arguments presented in the 12/19/2007 responses have been fully considered; the Examiners' response is as follows:

7.1 Applicants' arguments have been persuasive in that the previously applied rejections were valid for the previously presented claims but in view of the newly amended claims the previously applied rejections have been withdrawn.

7.2 An updated prior art search based on Applicants' newly amended claim language has revealed new art.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DWIN M. CRAIG whose telephone number is (571)272-3710. The examiner can normally be reached on 10:00 - 6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul L. Rodriguez can be reached on (571) 272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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